

S/N 10/585295
In response to the Office Action mailed July 21, 2009

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks.

Claim 1 has been amended and is supported in the specification at, for example, Fig. 6, reference numerals 51', 52' and 53'. Claim 1 has been further amended to include the features of claim 11. Claim 11 and 25-35 have been canceled without prejudice or disclaimer. Applicants retain the right to present claims 25-35 in a divisional application. Claims 4 and 5 have been amended to be rewritten in independent form and include features of claims 1, 2 and 3. Claim 12 has been amended editorially. No new matter is added.

Applicants note that Charlton et al. (US Patent No. 5,798,031) was newly cited by the Examiner but was not included on the Form 892. Applicants request that this reference be included on Form 892.

35 USC § 102 Rejections

Claims 1-3, 8-12, and 19-23 have been rejected under 35 USC 102(b) as being anticipated by Yamamoto et al. (U.S. Patent No. 6,436,255). Applicants respectfully traverse the rejection.

Claim 1 is directed to an analytical instrument having a flow path for moving a sample containing blood cells, a reagent portion, containing an electron mediator, arranged directly in the flow path and an additional reagent portion, containing an oxidoreductase, provided separately from the reagent portion arranged directly in the flow path, where the reagent portion and the additional reagent portion are provided on a same plane.

Yamamoto discloses a reagent including at least one of an electron mediator and an oxidoreductase supported on a carrier comprising a porous material (col. 3, lines 58-61). In other words, Yamamoto discloses that the conventional reagent is provided on a porous carrier and not arranged directly in the flow path as required in claim 1.

S/N 10/585295

In response to the Office Action mailed July 21, 2009

Therefore, Yamamoto does not teach or suggest a reagent portion arranged directly in the flow path.

Further, according to Yamamoto, a porous carrier improves the dissolution of the reagent into the sample solution because the carrier causes the reagent to contact a sample solution at a larger surface area (col. 3, lines 62-67). Dissolution of the reagent is prompted by exposing at least part of the carrier to the outside of the sample solution supply pathway (col. 4, lines 15-19 and Figs. 3-7). This implies that Yamamoto considers that sufficient dissolution of the reagent cannot be achieved, if the carrier is entirely accommodated in the flow path because, in this case, a specimen or sample is first introduced into the flow path and then will permeate the carrier until the reagent is dissolved. This is different than claim 1 where the reagent portion is directly arranged in the flow path and an additional reagent portion is provided in the same plane and is provided separately from the first-mentioned reagent portion. This allows for the reagent to be sufficiently dissolved by the sample as it flows over the predetermined distance, without using an extra carrier like that of Yamamoto, whose part is exposed from the flowpath. Therefore, in the present invention, no carrier is needed which is different from Yamamoto.

In addition, the carrier of Yamamoto is used to support the reagent and to filter solid components (blood cells). Therefore, in the conventional carrier, a no-reagent-supporting portion is reserved for filtering of solid components. This implies that Yamamoto intends to use only a sample containing no blood cells, and the reagent is dissolved by such a sample. This is different than where the blood cells are not excluded as recited in claim 1. Therefore, the glucose in the blood cells is utilized for analysis. Specifically, at the first reagent portion, the spreading of glucose from inside the blood cells to the outside is facilitated, so that a sufficient amount of glucose is extracted from the entire blood. Then, at the additional reagent portion, electrons are taken out from the glucose (page 22, lines 1-15). Therefore, an extra system for filtering blood cells is not needed which is technically different from Yamamoto.

Therefore, Yamamoto does not teach or suggest the features of claim 1 and the rejection should be withdrawn.

S/N 10/585295

In response to the Office Action mailed July 21, 2009

The rejection of claim 11 is moot in view of the cancellation of the claim. Claims 2-3, 8-10, 12, and 19-23 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claims 1-3, 8, 9, 20, 21, 23, and 24 have been rejected under 35 USC 102(e) as being anticipated by Nakaminami et al. (U.S. Patent No. 6,740,215). Applicants respectfully traverse the rejection.

Nakaminami is cited against original claim 1, but not against original claim 11. Amended claim 1 is a combination of claims 1 and 11 and is therefore, not anticipated by Nakaminami and the rejection should be withdrawn.

Claims 2-3, 8, 9, 20, 21, 23, and 24 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claims 1, 6, and 7 have been rejected under 35 USC 102(b) as being anticipated by Harding et al. (U.S. Patent No. 6,261,519). Applicants respectfully traverse the rejection.

Harding is cited against original claim 1, but not against original claim 11. Amended claim 1 is a combination of claims 1 and 11 and is therefore, not anticipated by Harding and the rejection should be withdrawn.

Claims 6 and 7 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claims 1-3, 8, 10-12, 20, 23, and 24 have been rejected under 35 USC 102(b) as being anticipated by Wilson (GB 2254436). Applicants respectfully traverse the rejection.

Wilson discloses two reagent portions 16 (Fig. 1). However, Wilson does not teach the use of two different kinds of reagent portions, such as the electron mediator and

S/N 10/585295
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oxidoreductase of claim 1, provided separately from each other for analyzing a single sample.

Specifically, Wilson teaches a plurality of assays, i.e., assay 1 using a reagent for glucose analysis, assay 2 using a reagent for ethanol analysis, and assay 3 using a reagent for aluminum analysis. In each assay, the electron mediator and oxidoreductase are fixed at the same portion (page 5, line 13 to page 7, line 35). In particular, Wilson teaches that, "... the reactor can accommodate a sequence of reactions involving the same sample, . . . For this purpose the reactor base can have the appropriate reagents applied thereto as respective transverse bands in a successively spaced assay along the base so that the reagents are mobilised in sequence as liquid is drawn into the capillary body." This is different than claim 1 where two different reagent portions are provided separately from each other. Therefore, Wilson does not teach or suggest the features of claim 1 and the rejection should be withdrawn.

The rejection of claim 11 is moot in view of the cancellation of the claim. Claims 2-3, 8, 10, 12, 20, 23, and 24 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

35 USC § 103 Rejections

Claim 4 has been rejected under 35 USC 103(a) as being unpatentable over Wilson (GB 2254436). Applicants respectfully traverse the rejection.

Claim 5 has been rejected under 35 USC 103(a) as being unpatentable over Wilson (GB 2254436). Applicants respectfully traverse the rejection.

Claim 4 recites an analytical instrument where the center-to-center distance between the reagent portion and the electron detection medium is so set that, when the sample contains the analysis target component in maximum amount of a predetermined detection range, electron transfer from the maximum amount of analysis target component to the electron mediator is substantially completed before the electron mediator becomes able to supply electrons to the electron detection medium.

Claim 5 recites an analytical instrument where the content of the electron mediator in the reagent portion is so set that, when the sample contains the analysis target

S/N 10/585295

In response to the Office Action mailed July 21, 2009

component in maximum amount of a predetermined detection range, the electron mediator can receive all the electrons taken from the maximum amount of analysis target component.

Claims 4 and 5 have been amended to be in independent form and include features set forth in claims 1, 2 and 3. The rejection contends that the features of claims 4 and 5 are only an intended use or would be obvious to one of ordinary skill in the art. Applicants believe that the amended claims overcome the rejection and ask the Examiner to reconsider and withdraw the rejections.

Claims 13-18 have been rejected under 35 USC 103(a) as being unpatentable over Wilson (GB 2254436). Applicants respectfully traverse the rejection.

Claims 13-18 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claims 21 and 22 have been rejected under 35 USC 103(a) as being unpatentable over Wilson (GB 2254436) in view of Nagakawa et al. (U.S. Patent No. 7,390,391). Applicants respectfully traverse the rejection.

Claims 21 and 22 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claim 5 has been rejected under 35 USC 103(a) as being unpatentable over Nakaminami et al. (U.S. Patent No. 6,740,215). Applicants respectfully traverse the rejection.

Claim 5 is allowable for the same reasons as detailed above. The rejection of this independent claim should be withdrawn. Applicants do not concede the correctness of the rejection.

S/N 10/585295
In response to the Office Action mailed July 21, 2009

Claims 21 and 22 have been rejected under 35 USC 103(a) as being unpatentable over Nakaminami et al. (U.S. Patent No. 6,740,215) in view of Nagakawa et al. (U.S. Patent No. 7,390,391). Applicants respectfully traverse the rejection.

Claims 21 and 22 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claims 4, 5, 13-18 and 24 have been rejected under 35 USC 103(a) as being unpatentable over Yamamoto et al. (U.S. Patent No. 6,436,255). Applicants respectfully traverse the rejection.

Claims 4 and 5 are allowable for the same reasons as detailed above. The rejection of these independent claims should be withdrawn. Claims 13-18 and 24 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claim 24 has been rejected under 35 USC 103(a) as being unpatentable over Yamamoto et al. (U.S. Patent No. 6,436,255) in view of Charlton et al. (U.S. Patent No. 5,798,031). Applicants respectfully traverse the rejection.

Claim 24 is allowable at least by virtue of its dependence on independent claim 1. The rejection of this dependent claim should be withdrawn. Applicants do not concede the correctness of the rejection.

Claims 20-22 have been rejected under 35 USC 103(a) as being unpatentable over Yamamoto et al. (U.S. Patent No. 6,436,255) in view of Nagakawa et al. (U.S. Patent No. 7,390,391). Applicants respectfully traverse the rejection.

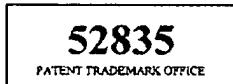
Claims 20-22 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

S/N 10/585295
In response to the Office Action mailed July 21, 2009

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

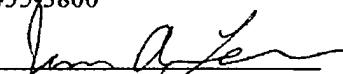
If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,



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